

Abstract

LOCATION FINDING SYSTEM AND METHOD

5 A method of locating an article or person comprises at least one transponding station(TS 1) having its own radio identity carried by a person or article in the radio coverage area of a radio system. The system comprises a plurality of clusters of spatially separate radio units(M1 to M7) having transceiving means and received signal strength determining means, each of
10 the radio units having an individual identity. Each cluster is associated with a network interrogating station(NIU(1), NIU(2)) comprising transceiving means for communicating with at least the radio units in its cluster. A central station(10) has transceiving means for communicating with a plurality of the interrogating stations and storage means for storing a database comprising the
15 locations of the radio units(M1 to M7). When it is required to determine the location of the transponding station, the central station transmits an enquiry signal to the interrogating stations which in turn broadcast the enquiry signal. The transponding station in response to hearing its radio identity in an enquiry signal transmits a reply signal including its own radio identity on a frequency
20 (F2) to which the radio units are already tuned or to which they have retuned in the case of the transmit frequency being the same as that of the enquiry signal. The in-range radio units identify the transponding station and determine the received signal strength and in response to receiving an interrogation signal the radio units relay the radio identity of the transponding station, the
25 determined received signal strength and its own identity to the interrogating station which relays the information to the central station(10), whereat the location of the transponding station relative to the positions of the radio units is computed.

30 (Figure 1)